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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

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GROUP 3600

In re the application of:

Heikki KALLIO et al.

Serial Number: 10/018,785

Group Art Unit: 3653

Filed: April 8, 2002

Examiner: Kohner, Matthew J.

For: METHOD FOR THE ANALYSIS OF A NUTRITIVE PRODUCT

REQUEST FOR RECONSIDERATION

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

April 26, 2004

Sir:

In response to the Official Action mailed October 27, 2003, a Petition and fee for a three month Extension of Time being submitted herewith, please reconsider this application in view of the following remarks. Claims 8-16 are pending.

The 35 U.S.C. § 103(a) rejection of claims 8-16 over U.S. Patent No. 4,384,206 to Bjarno is respectfully traversed. A feature of the claimed method for the analysis of a nutritive product is analyzing a sample of the nutritive product by direct inlet gas-phase Fourier Transform infrared spectroscopy fast enough to make the result of the analysis available to the stage of treatment while the analyzed product still is in the stage of treatment. In this regard, "direct inlet gas-phase" FT-IR spectroscopy is defined in the specification as excluding FT-IR coupled with any chromatographic device (Specification, page 5, lines 8-11).

Bjarno fails to raise a *prima facie* case of obviousness against claims 8-16 because it fails to disclose, teach or suggest performing FT-IR using direct inlet gas-phase sample injection. The Patent Office concedes that Bjarno itself fails to disclose FT-IR analysis, and cites U.S. Patent No. 4,102,646 to Sleeter for the disclosure missing from Bjarno. However, Sleeter also fails to disclose FT-IR spectroscopic analysis of nutritive samples using direct inlet gas-phase sample injection.

One of ordinary skill in the art is given no motivation to suggestion to employ direct inlet gas-phase sample injection when analyzing nutritive samples using FT-IR. Instead, the prior art would suggest other sampling techniques. For example, Sanders, "Applications of Fourier Transform Infrared Spectroscopy in the Field of Foods and Beverages," 17 Anal. of Foods and Beverages: Modern Techniques 553-583 (1984)(of record) teaches various possible usages of FT-IR in the analysis of foods and beverages. The sampling methods taught by Sanders include liquid or solid phase sampling such as ATR, LC/IR, diamond anvil cell, diffuse reflectance, PAS reflection-absorption and diamond cell. The only gas-phase method disclosed by Sanders is GC/FTIR. As discussed above, the present application specifies that "direct inlet" gas-phase FTIR spectroscopy requires the sample gas or volatiles to be injected directly into the spectrometer's sample cell, and that coupling the FT-IR to a chromatographic device is specifically

excluded. In this regard, when gas chromatography is used with FT-IR, the FT-IR spectrum is not a multi-component spectrum but rather a single component spectrum which can be used for identification and quantification. None of the methods described by Sanders contain any reference or even implication of using FT-IR in a gas-phase, multi-component analysis of food volatiles.

The claimed method provides a very fast and a very accurate analysis of a food product which is even applicable to the very fast on-line processes of modern food technology. In fact, the actual analysis step can be performed using appropriate apparatus as disclosed in the examples of the application, in seconds or parts thereof. Reconsideration and withdrawal of the obviousness rejection of claims 8-16 over Bjarno are earnestly requested.

It is believed the application is in condition for allowance. Reconsideration and withdrawal of the obviousness rejection of claims 9-16, and issuance of a Notice of Allowance directed to those claims, are earnestly requested. The Examiner is urged to telephone the undersigned should he believe any further action is required for allowance.

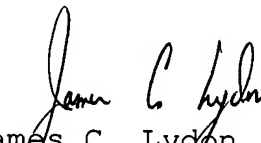
A Petition and fee for a three month Extension of Time are attached. It is not believed any additional fee is required for entry and consideration of this Response. Nevertheless, the

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**PATENT**

Commissioner is authorized to charge our Deposit Account No. 50-1258 in the amount of any such required fee.

Respectfully submitted,

  
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Enclosure:  
Petition for Extension of Time